



ENVIRONMENTAL PROTECTION AGENCY

6560-50-P

[FRL-9933-10-ORD]

**Office of Research and Development; Ambient Air Monitoring
Reference and Equivalent Methods: Designation of a Two New
Equivalent Methods**

AGENCY: Environmental Protection Agency, (EPA).

ACTION: Notice of designation of two new equivalent methods for monitoring ambient air quality.

SUMMARY: Notice is hereby given that the Environmental Protection Agency (EPA) has designated, in accordance with 40 CFR Part 53, two new equivalent methods: one for measuring concentrations of PM_{2.5} and one for measuring concentrations of ozone (O₃) in the ambient air.

FOR FURTHER INFORMATION CONTACT: Robert Vanderpool, Human Exposure and Atmospheric Sciences Division (MD-D205-03), National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, North Carolina 27711. E-mail:

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SUPPLEMENTARY INFORMATION: In accordance with regulations at 40 CFR part 53, the EPA evaluates various methods for monitoring the concentrations of those ambient air pollutants for which EPA has established National Ambient Air Quality Standards (NAAQSs), as set forth in 40 CFR part 50. Monitoring methods that are determined to meet specific requirements for adequacy are designated by the EPA as either reference methods or equivalent methods (as applicable), thereby permitting their use under 40 CFR part 58 by States and other agencies for determining compliance with the NAAQSs.

The EPA hereby announces the designation of two new equivalent methods for measuring pollutant concentrations in the ambient air: One for PM_{2.5} and one for ozone. These designations are made under the provisions of 40 CFR part 53, as amended on August 31, 2011 (76 FR 54326-54341).

The new PM_{2.5} Class III equivalent method is nearly identical to a corresponding Met One sampler (EQPM-1013-209) that had been previously designated by EPA as an equivalent method sampler for PM_{2.5}. The significant difference is that the

newly designated PM_{2.5} equivalent method sampler is configured to use an URG-2000-30EGN PM_{2.5} as the principle size separator (fractionator) for the sampler rather than the WINS impactor or the BGI VSCC™ used in the corresponding PM_{2.5} equivalent method sampler. The newly designated Class III equivalent method is identified as follows:

EQPM-0715-266, Met One Instruments, Inc. BAM-1020 Beta Attenuation Mass Monitor - PM_{2.5} FEM Configuration," configured for 24 1-hour average measurements of PM_{2.5} by beta attenuation, using a glass fiber filter tape roll (460130 or 460180) and a sample flow rate of 16.67 liters/min and with the standard (BX-802) EPA PM₁₀ inlet (meeting 40 CFR 50 Appendix L specifications) and with an URG-2000-30EGN PM_{2.5} (BX-809) cyclonic separator, BX-596 combo T/RH sensor, BX-827(110V) or BX-830(230V). Instrument must be operated in accordance with the BAM 1020 Particulate Monitor operation manual, revision k or later. This PM_{2.5} equivalent method designation only applies to the BAM-1020 configured with the URG-2000-30EGN cyclone.

In the particular case of the new Met One Class III PM_{2.5} equivalent method, a corresponding Met One PM_{2.5} equivalent

method sampler (RFPS-1013-209) may be converted to the equivalent method configuration by replacement of the WINS impactor or the VSCC™ cyclone with the URG-2000-30EGN cyclone specified in the equivalent method description. The URG-2000-30EGN cyclone should be purchased from the sampler manufacturer, who will also furnish installation, conversion, operation, and maintenance instructions for the URG-2000-30EGN cyclone, as well as a new equivalent method identification label to be placed on the sampler. If the conversion is to be permanent, the original designation equivalent method label should be removed from the sampler and replaced with the new designated equivalent method label.

The application for equivalent method determination for the PM_{2.5} method was received by the Office of Research and Development on June 18, 2015. This monitor is commercially available from the applicant, Met One Instruments, Inc., 1600 Washington Blvd., Grants Pass, OR 97526.

The new Ozone equivalent method is an automated monitoring method (analyzer) utilizing a measurement principle based on based on non-dispersive ultraviolet absorption photometry. The

newly designated equivalent method is identified as follows:

EQOA-0815-227, "2B Technologies Model Personal Ozone Monitor (POM)," operated in a range of 0 - 0.5 ppm in an environment of 20-30 °C, temperature and pressure compensation, using a 10 second averaging time, with a 12V DC source supplied by a 100-240V AC power adapter, operated according to the POM Operation Manual and with or without the following: cigarette lighter adapter or a 12V DC battery or a 7-24 V battery for portable operation, USB data port with computer cable.

The application for equivalent method determination for the ozone method was received by the Office of Research and Development on September 18, 2013. This analyzer is commercially available from the applicant, 2B Technology, Inc., 2100 Central Ave., Suite 105, Boulder, CO 80303.

Test monitors representative of these methods have been tested in accordance with the applicable test procedures specified in 40 CFR part 53, as amended on August 31, 2011. After reviewing the results of those tests and other information submitted in the application, EPA has determined, in accordance

with part 53, that these methods should be designated as equivalent methods.

As designated equivalent methods, these methods are acceptable for use by states and other air monitoring agencies under the requirements of 40 CFR part 58, Ambient Air Quality Surveillance. For such purposes, the method must be used in strict accordance with the operation or instruction manual associated with the method and subject to any specifications and limitations (e.g., configuration or operational settings) specified in the applicable designated method descriptions (see the identification of the methods above).

Use of the methods also should be in general accordance with the guidance and recommendations of applicable sections of the "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume I," EPA/600/R-94/038a and "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, Ambient Air Quality Monitoring Program" EPA-454/B-08-003, December, 2008. Provisions concerning modification of such methods by users are specified under Section 2.8 (Modifications of Methods by Users) of Appendix C to 40 CFR part 58.

Consistent or repeated noncompliance should be reported to:
Director, Human Exposure and Atmospheric Sciences Division (MD-E205-01), National Exposure Research Laboratory, U.S.
Environmental Protection Agency, Research Triangle Park, North
Carolina 27711.

Designation of this new equivalent method is intended to assist the States in establishing and operating their air quality surveillance systems under 40 CFR part 58. Questions concerning the commercial availability or technical aspects of the method should be directed to the applicant.

Dated: August 18, 2015.

Jennifer Orme-Zavaleta,
Director,
National Exposure Research Laboratory.

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